

REMARKS

Claims 1-13, 17-20, 22-24, and 27-30 were pending in the application and all were rejected. Claims 1 and 29 have been amended. Support for the claim amendments can be found in Applicant's disclosure as published in United States Patent Publication Number 2006/0271530 A1, specifically at paragraphs [0059] and [0060]. The claim amendments do not introduce any new matter,; they merely serve to better describe the document identifier. Applicant respectfully requests reconsideration.

CLAIM REJECTIONS UNDER 35 USC §103

The Office Action has rejected claims 1-8, 23-24, and 27-30 under 35 USC 103(a) as being unpatentable over Rinaldi et al. ("Routing and Data Location in Overlay Peer-to-Peer Networks," July 2002), in view of Ranganathan et al. ("Improving Data Availability through Dynamic Model-Driven Replication in Large Peer-to-Peer Communities"). Applicant respectfully traverses this rejection and submits the following in support thereof:

As to independent claims 1 and 29, the Office Action at page 3 concedes that "Rinaldi does not explicitly teach: wherein, upon receiving a 'replica not available' response from each of the addressed entities: setting a lowest replica number out of the addressed replica numbers as an upper limit for a new set of replica numbers associated with the entities; selecting another entity from the identified entities associated with the new set of replica numbers for addressing the document related request."

Ranganathan, directed to a replica management system, is cited for this teaching at pg. 3, Section 4.1. Ranganathan, however, does not teach or suggest "setting a lowest replica

number of the addressed replica numbers as an upper limit for a new set of replica numbers associated with the entities; selecting another entity from the identified entities associated with the new set of replica numbers for addressing the document related request.” Nowhere does Ranganathan mention setting a lowest replica number as an upper limit for a new set of replicas. In fact, Ranganathan’s method is actually a teaching away of the claimed limitation. See Ranganathan at page 3:

“Since each peer in the system acts independently, there is considerable chance that two peers simultaneously take the decision of replicating the same file. If storage resources are scarce, then the extra-replicas will soon be replaced with others. If storage resources are abundant, then the excessive replication is not necessarily harmful.”

Also see Ranganathan at page 4, Section 4.3:

“However, in both scenarios, multiple nodes could simultaneously create replicas for the same file. Though the extra replicas will eventually be overwritten, there still remains the cost of wasted bandwidth and the problem of efficient resource utilization.”

The above excerpts highlight one of the scenarios the instant application addresses. With the retrieval method of claim 1, replicas can’t be randomly added or deleted as they are in Ranganathan; they can only be accessed and/or deposited at defined locations (entities), the entities being determined by applying the claimed function with a replica number as input. The problem of “extra” replicas and duplicates as seen in Ranganathan is avoided by setting the lowest replica number as the upper limit for a new set. Therefore, claims 1 and 29 and the dependent claims 2-8, 23-24, 27, 28, and 30 are patentable over the cited references.

The Office Action rejected claims 9-13, 15, 17-20, and 22 under 35 USC 103(a) as being unpatentable over Rinaldi et al. in view of Ranganathan et al., and further in view of Guy et al. (Replica Management in Data Grids, July 2002). Applicant respectfully traverses this rejection. Claims 9-13, 15, 17-20, and 22 are dependent on claim 1 which includes the limitations discussed above, which limitations are not found in Rinaldi, Ranganathan, or Guy; therefore claims 9-13, 15, 17-20, and 22 are patentable over the cited references.

CONCLUSION

For the foregoing reasons, Applicant respectfully requests allowance of the pending claims. The Director is hereby authorized to charge any fees which may be required, including any petition for extension of time fees under §1.17, or credit any overpayment, to Deposit Account Number 50-0510.

Respectfully submitted,

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